

CLAIMS

What is claimed is:

- 5 1. A geocoding method comprising
identifying from orthorectified imagery locations of entities associated with each side of a
street segment;
ordinally numbering the identified locations with respect to positions along each side of
the street segment;
- 10 determining street addresses associated with each side of the street segment; and
associating the identified locations with the determined street addresses to produce
geocoded street addresses for each side of the segment.
- 15 2. The method of claim 1 wherein determining street addresses comprises:
consulting a Street Map database to obtain a range of possible addresses associated with
each side of the street segment; and
consulting a Situs Address database to obtain the street addresses.
- 20 3. The method of claim 2 wherein the range of possible addresses comprises:
a range of even addresses; and
a range of odd addresses.
- 25 4. The method of claim 1 wherein the street addresses comprise:
a list of odd addresses on the street segment and
a list of even addresses on the street segment.

5. The method of claim 1 wherein the identifying locations of entities comprises:
selecting centroids associated with entity image features, and
associating the centroids with the street segment.
- 5 6. The method of claim 5 wherein selecting centroids comprises extracting the entity image features and calculating the centroids from the extracted entity image features.
- 10 7. The method of claim 1 wherein associating the identified locations with the determined street addresses comprises matching, on each side of the street segment, the ordinal numbering of the identified locations with a natural order of the determined street addresses.
- 15 8. The method of claim 1 further comprising adding the geocoded street addresses to a database if there is a one-to-one matching between the identified locations and the determined street addresses.
9. The method of claim 1 wherein associating the identified locations with the determined street addresses comprises:
20 consulting an entity registry database identifying multi-unit buildings in the street segment and
associating multiple street addresses with identified locations corresponding to multi-unit buildings.
- 25 10. The method of claim 1 further comprising, if there is not a one-to-one matching between the identified locations and the determined street addresses, then redefining the street segment to include multiple adjacent segments.

11. A geocoding method comprising:

obtaining a linearly ordered set of entity geocodes associated with a side of a street segment;

5 obtaining a linearly ordered set of entity addresses associated with the side of the street segment; and

associating the entity geocodes with the entity addresses by a linearly ordered matching, thereby geocoding the entity addresses.

10 12. The method of claim 11 wherein obtaining the linearly ordered set of entity geocodes comprises:

obtaining a set of entity geocodes associated with the side of the street segment, where each entity geocode potentially represents an addressable entity, and

linearly ordering the received entity geocodes to produce the linearly ordered set of
15 geocodes.

13. The method of claim 12 wherein obtaining the set of entity geocodes associated with the side of the street segment comprises identifying image features of an aerial or satellite image and correlating the image features with street segment data from a
20 street map data source.

14. The method of claim 13 wherein identifying image features of an aerial or satellite image comprises identifying street segments and potentially addressable entities.

25 15. The method of claim 12 wherein linearly ordering the received entity geocodes comprises calculating intersection points between the street segment and lines drawn perpendicular to said street segment to said entity geocodes.

16. The method of claim 12 wherein linearly ordering the received entity geocodes comprises:

calculating intersection points between the street segment and lines drawn perpendicular
5 to said street segment to said entity geocodes; and
assigning a linear order to the intersection points based on distances along the street
segment from an endpoint of the street segment to the intersection points.

17. The method of claim 11 wherein obtaining the linearly ordered set of entity geocodes
10 comprises receiving street segment data for endpoints of the street segment.

18. The method of claim 11 wherein obtaining the linearly ordered set of entity addresses
comprises receiving a list of assignable addresses associated with the street
segment and linearly ordering the list.
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19. The method of claim 18 wherein obtaining the linearly ordered set of entity addresses
comprises associating the list with the street segment by receiving address range
direction data and street segment side data.

20 20. The method of claim 11 wherein associating the entity geocodes with the entity
addresses is performed in accordance with address range direction data and street
segment side data.

21. The method of claim 11 wherein associating the entity geocodes with the entity
25 addresses comprises producing for each side of the segment a one-to-one
correspondence between the numerical order of the list of assignable addresses and
the linear order of the set of entity geocodes.

22. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises accessing a entity registry database comprising multi-unit buildings and multi-building entities.

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23. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises redefining the street segment.

10 24. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises transferring at least one of the entity addresses to an adjacent street segment.

25. The method of claim 11 wherein associating the entity geocodes with the entity addresses comprises switching the addresses between right and left sides of the segment.

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